

REMARKS

Upon review of the Office Action and the references, the specification and the claims have been amended. Claims 1, 3, 4, 6, 9, 11, 12, 15-18, 20, 21 have been amended, claims 7, 8, 10, 13, 14 remain the same and claims 2, 5, 19 have been cancelled.

First, the Applicants' invention is a coin box and appurtenant mechanism for a vending machine. More precisely, this coin box learns the value of coins or tokens placed therein via a light pipe measuring the time taken by the coin to roll past two known points and from that time, the diameter of the coin or token is determined. The coin box has a curved downward track with a laterally inclined floor. The coin box accepts coins, tokens, or PIN access. The coin box stores information on the coins deposited, PIN accesses, and product consumed. The coin box then communicates that information via infra red transmission to a separate storage device for later use in managing the stocking of the vending machine.

Second, the examiner has objected to the declaration for errors in the digits of select application serial numbers. Those digits have been corrected.

Third, the examiner has also objected to the informalities of serial numbers in the specification. Those informalities have been corrected.

Fourth, the examiner has cited U.S. Pat. No. 3,147,838 to Mueller for obviousness over claim 1. Mueller describes an automatic vending machine. The machine receives coins and in the proper amount of coins, activates mechanical means to release the appropriate contents. The examiner has cited Mueller's coin box 304 and related description of price lines against the present invention.

However, box 304 is described by Mueller as a coin register of any suitable type. See col. 6, lines 60-65. Applicant asserts that such a description is overbroad and indefinite. Further, Mueller does not describe the valuation of coins placed in the box. In contrast, the present invention has a coin box that evaluates coins deposited therein using measurement of a coin's geometry, particularly the diameter. Claim 1 has been amended to include coin geometry and claim 2 has been incorporated into claim 1.

Fifth, the examiner has cited Japanese Patent Publication 2002-133487 to Hiroshi for obviousness against claims 3-6. Hiroshi shows a selector device for milled

coins that detects the edge of a coin therein. The coin C rolls upon a guide rail 50 while light from projector 2 passes the edge of the coin, subject to interruption by the milling, to a light reception part 7.

The present invention though measures the time taken by a coin to pass between two light pipes. The measured time then provides the diameter of the coin that has just passed and from the diameter the monetary value can be determined. In the present invention, the light pipes serve as timing markers that do not detect the edge condition, or milling, upon a coin.

Sixth, the examiner has cited allowed U.S. Pat. App. No. 10/337,762 to Naufel et al. for obviousness in relation to claims 7-10 of the present invention. Naufel shows a medication dispensing device for controlled substances, such as narcotics. Naufel has a key pad and display unit that allow for alphanumeric entry and display of information. Such information includes security codes and record keeping codes that when proper, allow for dispensing of medication from within the device. Upon proper codes, the device operates a bi-axial worm drive plunger as in Fig. 1. On the other hand, Naufel does not track and display monetary amounts from a coin detector as in the present invention.

However, because personal identification numbers, PIN, generally operate as a password, or identification of a user, and as money is involved in the present invention, display of a personal identification number is unwise. Thus claim 9 has been edited to remove such information from display.

Seventh, the examiner has cited U.S. Pat. No. 6,206,167 to Taylor et al. for obviousness against the present invention in claim 11. Taylor describes a coin turning chute. The chute directs a coin through a ninety degree turn from the direction of initial deposit into the chute. The chute also directs a coin below the location of initial deposit of the coin. Generally a coin enters the chute on its edge and rim first while it leaves the chute on its edge and face first.

In contrast, the present invention receives a coin on edge and releases it on edge. The floor of the track in the present invention is angled slightly downward towards the interior of the coin box, which is generally in the plane perpendicular to the direction traveled by the coin. The angled floor gently tips the coin towards the outside wall where bouncing of the coin is dampened, see Specification page 26, lines 18-21. Further, the

curve of the track directs a coin to the outside wall where friction slows the speed of the coin. Id. Applicant asserts that Taylor does not show a chute with an angled floor.

Eighth, U.S. Pat. No. 5,176,238 to Deglau has been cited for obviousness against claims 12-14 of the present invention by the examiner. Deglau shows a coin collector with pathways of various geometric forms and directions. The coin collector has visible pathways for coins so that depositors of coins can be amused by watching the coins fall. Examiner has cited an upward portion 33 against claims 12-14. Deglau describes part 33 as a ramp used to launch smaller coins over opening 35 to ramp 32. Deglau does not teach of ramp 33 for slowing purposes but rather to elevate the angle of flight of a coin so that the coin does not fall into opening 35.

The present invention has a track 405 generally inclined downward to induce a coin to roll directly into the coin box under gravity. A coin deposited into the track starts rolling with its initial velocity and adds the velocity induced by the incline of the track, then the coin velocity may exceed that needed for the light pipes. The present invention has a slight upward slope in the track just after the entrance for the coins. The upward slope is continuous with the remainder of the track. But, Deglau has ramp portion 33 separated and discontinuous with its counterpart track 32 which is not the present invention.

Ninth, U.S. Pat. No. 5,980,089 to Weis has been cited for obviousness against claims 15-17 of the present invention by the examiner. Weis describes an automatic token dispensing apparatus mounted upon a counter, typically for an establishment with amusement devices that operate using tokens. Weis describes a wireless communications link between the POS terminal 102 and the controller 118 that dispenses tokens. However, the POS terminal and the controller are generally collocated in the same counter, see Fig. 1. Though the POS terminal and the controller communicate, the POS terminal is not described as communicating financial and operational information to an outside device for later use in a separate computer.

The present invention on the other hand, has a coin box that stores financial and operational information in the internal control circuitry, see Specification page 27 lines 1-8 and page 29 lines 28-31. As the present invention is unmanned, the financial and operational condition of the invention, including the coin box, is checked from time to time, see Specification page 2, lines 20-27 and page 29 lines 28-31. During checking of

the coin box, vending personnel seek the operational and financial information retained by the internal control circuitry. The personnel can download that information from the circuitry through wired or wireless communications to a storage device for later use by a computer. The personnel then take the storage device to the next snack dispenser at the next location. Unlike Weis, the coin box in the present invention communicates wirelessly to a storage device that is separate from the coin box or snack dispenser.

Tenth, the Examiner has cited the patent to Mueller for an obviousness rejection over claims 18-20. As before, Mueller does not describe the valuation of coins placed in the box. In contrast, the present invention has a coin box that evaluates coins deposited therein using measurement of a coin's geometry: the diameter. Claim 18 has been amended to include monetary valuation of a coin and claim 19 has been incorporated into claim 18.

Further, the Examiner has again cited the Weis patent for rejecting claims 18-20 for obviousness. As before, Weis described a token vending machine in a counter with a POS terminal. The vending machine has a controller and the POS terminal generally collocated in the same counter. Though the components of the vending machine communicate internally, the POS terminal is not described as communicating information to a device, separate from the vending machine, for later use in a separate computer.

Eleventh, the patent application to Naufel has again been used to reject claim 21 for obviousness. As before, Naufel shows a secure dispensing device for narcotics. Naufel has a key pad and display unit that allow for alphanumeric entry and display of information. But, Naufel does not track and display monetary amounts from a coin detector.

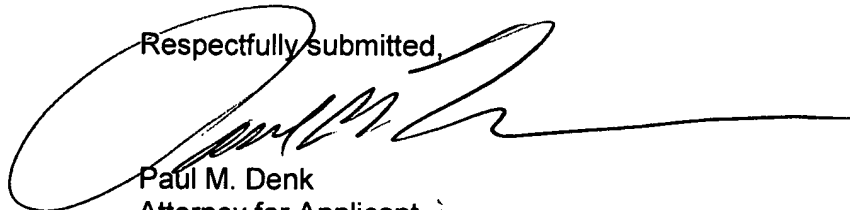
As before, display of a personal identification number may allow the unscrupulous to purchase snacks at the expense of others. However, because personal identification numbers generally operate as a password, or identification of a user, and as money is involved in the present invention, claim 21 has been edited to remove such information from display.

The examiner's attention is directed to the cases of *Ex parte Beuther*, 71 USPQ2 1313, (Bd. Pat. App. & Int. 2003) and *In re Geiger*, 815 F2d. 686 (Fed. Cir. 1987). Hence, as stated in the case of *In re Geiger*, obviousness can not be established by the

teachings of the prior art to produce the claimed invention, absent some teaching, suggestion, or incentive supporting that combination

The claims now active in this application are believed to be in condition for allowance. Favorable action by the examiner is respectfully requested.

Respectfully submitted,

A large, stylized handwritten signature in black ink, likely belonging to Paul M. Denk, is written over the typed name and address.

Paul M. Denk
Attorney for Applicant
Pat. Off. Reg. No. 22,598
763 South New Ballas Road, Ste. 170
St. Louis, MO 63141
(314)872-8136

PMD/cm